



Dart Hawkesbury
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

646.3913
Job Sheet 168258



Part No: 646.3913

Job Qty: 5 ea

Part Name: Shim



Part Weight: 0 lbs

Status: Scheduled

Priority: Medium

Job Created: 11/13/17

Job Tracking No:

Due Date: 11/28/17

Created By: Linda Lacelle

Type: Stock

Description:

Ship Via:

Bill of Materials

Job Routing

Op No	Operation	Qty	Start Date	Due Date	Standard		Workcenter/Supplier		Sign-off
					Setup hrs	Run Hrs	Workcenter / Supplier	Lead Time	
90	Start up Operation	5 Ea		11/27/17	0.00	0.00	Start Up Container		OK 17/12/30
110	Waterjet	5 pcs		11/28/17	0.00	0.13	Waterjet1		OK 17/12/30
120	QC	5 pcs		11/28/17	0.00	0.00	QC2		OK 17/12/30
130	QC	5 pcs		11/28/17	0.00	0.00	QC8		38
140	Outsource	5 pcs		11/28/17			MEI001-VC		AT 18/01/31
150	Packaging	5 pcs		11/28/17	0.00	0.00	Packaging2		AT 18/01/31
160	QC	5 pcs		11/28/17	0.00	0.00	QC5		38
170	Packaging	5 pcs		11/28/17	0.00	0.00	Packaging3		21 9-80 9-80 9-80
180	QC21-SA	5 Ea		11/28/17	0.00	0.00	QC21		21 9-80 9-80 9-80

Part Op 110 - 1-Cut as per Dwg Dwg Rev: N/C1 Prog Rev: N/C1 2-Deburr if necessary
Descriptions: 140 - Issue P/O: 38806 Cad Plating

170 - ***IDENTIFY AS PER APICAL MPP-120 BY STAMPING THE P# AND REV***

JAN 17 2018

DAS
13
9-80

CC K106

Job Allocations

Operation	Component Part	Required	Inventory	Allocated	Std Qty
90-Start up Operation	MC1095S.032	0	14	0	0

Part Specifications

Specifications could not be found.

Plex 11/14/17 7:24 AM dart.boucher.sylvie

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE



QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No: _____ N Date: _____ Part No: Revision: Operation: Change No: Start up Operation Mfg Date: 12/30/17 Job No: 168258	DISPOSITION S027799 DART AEROSPACE	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th colspan="4" style="text-align: center;">AGAINST DEPARTMENT/PROCESS</th> </tr> <tr> <td style="width: 15%;">Skid-tube</td> <td style="width: 15%;">Cross tube</td> <td style="width: 15%;">Water Jet</td> <td style="width: 15%;">Engineering</td> </tr> <tr> <td>Machining</td> <td>Small Fab</td> <td>Prod. Eng. Coord.</td> <td>Quality</td> </tr> <tr> <td>Thermoforming</td> <td>Finishing</td> <td>Rec/Store/Packaging</td> <td>Other</td> </tr> <tr> <td>Large Fab</td> <td>Composite</td> <td>Supplier</td> <td></td> </tr> </table> QTY Effective : _____ MRB (QSI042) Approval <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th style="text-align: center;">Disposition</th> </tr> <tr> <td style="height: 150px;"></td> </tr> </table> Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval				AGAINST DEPARTMENT/PROCESS				Skid-tube	Cross tube	Water Jet	Engineering	Machining	Small Fab	Prod. Eng. Coord.	Quality	Thermoforming	Finishing	Rec/Store/Packaging	Other	Large Fab	Composite	Supplier		Disposition	
AGAINST DEPARTMENT/PROCESS																											
Skid-tube	Cross tube	Water Jet	Engineering																								
Machining	Small Fab	Prod. Eng. Coord.	Quality																								
Thermoforming	Finishing	Rec/Store/Packaging	Other																								
Large Fab	Composite	Supplier																									
Disposition																											

Dart Aerospace Ltd.
 1270 Aberdeen Street
 Hawkesbury, ON K6A 1K7
 CANADA
 TEL.: 1 613 632-5200
 Email: sales@dartaero.com
 www.dartaerospace.com



APICAL INDUSTRIES, INC.
dba DART AEROSPACE

ENGINEERING CHANGE NOTICE NO.

05243

SHEET 1 OF 1

DWG NO. 646.3900

REV: N/C

PREPARED BY

J. BECKER

DATE: 11/13/15

EFFECT ON DWG

☐ INC. ☒ UNINC.

DWG TITLE: SHIM

APPROVED BY:

ENGR

MFG

QC

EFF.

CURRENT ORDER

TRANSACTION CODES (TC):
A-ADD
R-REVISE
C-CREATE
D-DELETE

REASON: REVISED VIEWS. UPDATED TEMPLATE AND TITLE BLOCK.

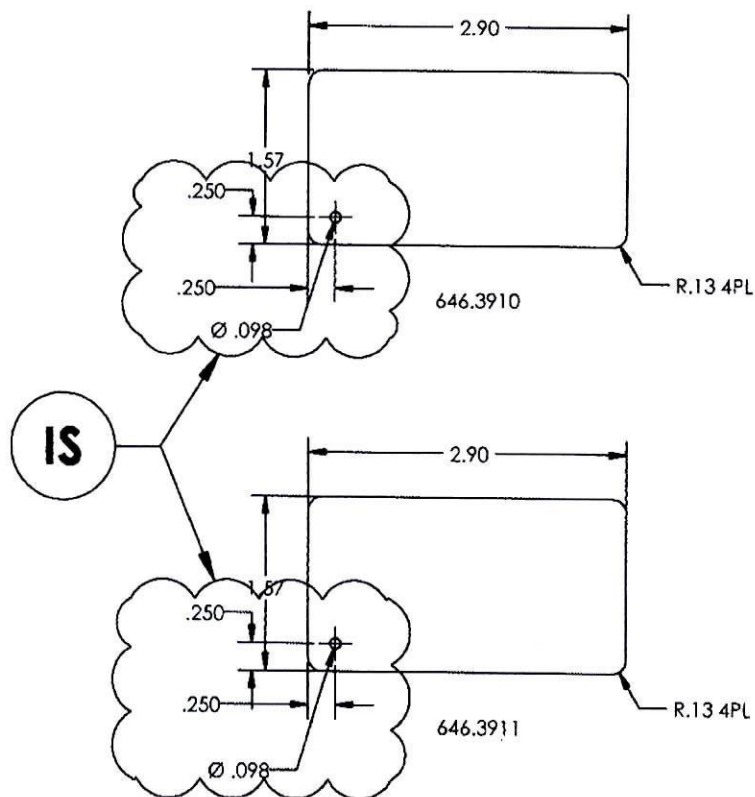
ECR:

15-275

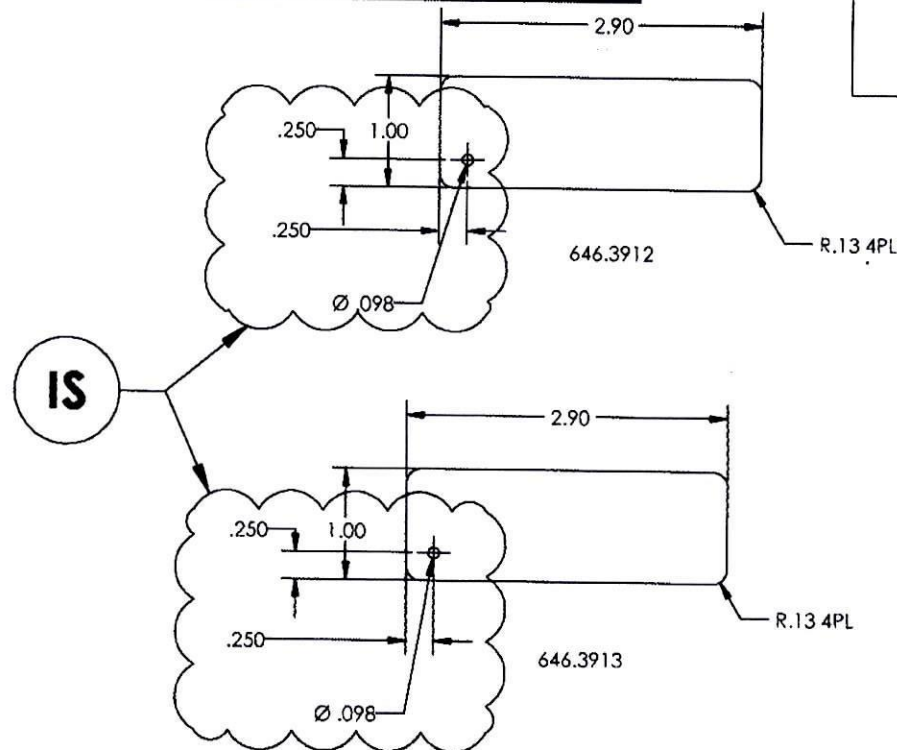
ACTION ITEM:

1. N/A.

SHEET 1, ZONE B2 IS:



SHEET 1, ZONE B5 IS:



SHEET 1, ZONE C2 IS:

SHEET 1, ZONE C5 IS:

DOCUMENTS EFFECTED:

☐ PATTERN ☐ MDL ☐ INSTALL INSTRUCTIONS ☐ ICA ☐ FMS ☐ BOM

CHANGE CATEGORY

☐ MAJOR ☒ MINOR

DER REVIEW REQUIRED

☐ YES ☒ NO

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

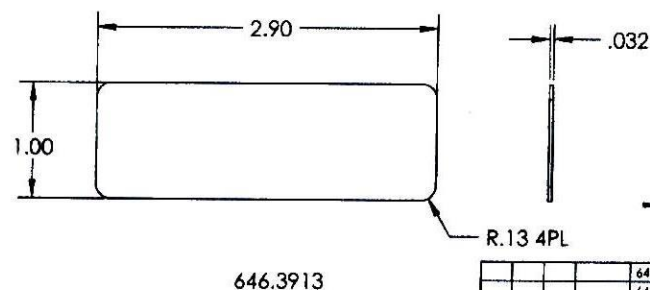
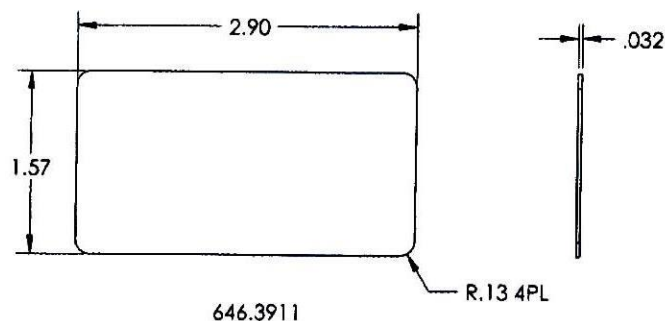
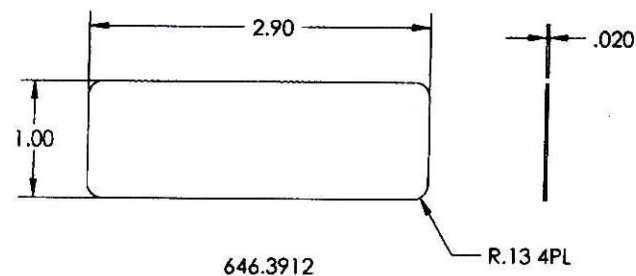
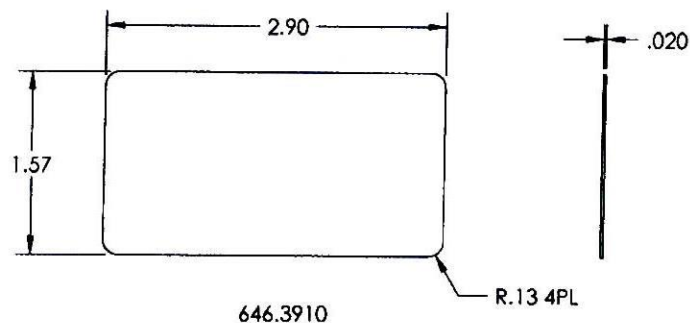
Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date :	Step #:	QTY Effective :		MRB (QSI042) Approval	
Description Work Order Deviation			Disposition		
			Completed By		
			Lead hand / Supervisor Approval Verification		
			QC / QA Coordinator Approval		
Root Cause		FAULT CATEGORY			
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐
OTHER :					

THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF APICAL INDUSTRIES. ANY REPRODUCTION IN PART OR WHOLE WITHOUT THE WRITTEN PERMISSION OF APICAL INDUSTRIES IS PROHIBITED.

NOTES:

- 1 MATERIAL: SHIM STOCK, C1095 BLUE-TEMPERED SPRING STEEL
- 2 FINISH: CAD PLATE PER QQ-P-416 TYP II CL2
- 3 IDENTIFY IAW MPP-120

REVISIONS		
REV.	DESCRIPTION	DATE



UNINCORPORATED ECN(s)

05243

		646.3913	SHIM	▲	▲
		646.3912	SHIM	▲	▲
		646.3911	SHIM	▲	▲
		646.3910	SHIM	▲	▲
	FIND #	PART #	DESCRIPTION	MAT'L	SPEC.
QTY	PARTS LIST				
NEXT ASSY (S)	ORIGINAL DATE: 08-03-08 DESIGNED BY: J. REEDER DRAWN BY: P. BRAVO APPROVED BY:  CONTRACT NO.				
646 4000	UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES TOLERANCES ARE: 2 PLACE DECIMALS ±.01 3 PLACE DECIMALS ±.005 ANGLES				
	APICAL INDUSTRIES 2608 TEMPLE HEIGHTS DR. OCEANSIDE, CA. 92056-3512 (760) 724-5300				
	SHIM				
	REV	CAGE CODE	DWG NO.	REV	
	B	07M26	646.3900	N/C	
	SCALE NONE				
	SHEET 1 OF 1				

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval		
Description Work Order Deviation				Disposition				Completed By	
								Lead hand / Supervisor Approval Verification	
								QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____							
Misidentified ☐	Past Due ☐								



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

PURCHASE ORDER **PO038806**

Supplier: GRO002-VC
Group Altech
2455 Halpern
St Laurent
QC
H4S 1N9 Canada
Phone: 514-335-3666
Fax: 514-335-3868

PO No: PO038806

PO Date: 1/17/18

Due Date: 1/31/18

**Purchase Order
Revision:**

Revision Date:

Ship-To Contact: Baker, Diane
Phone: dbaker@dartaero.com

*REVISED \$
P/O*

Ship To: 1270 Aberdeen Street
Hawkesbury
ON
K6A 1K7 Canada
Phone: 613-632-5200

Via: Ground

Pymt Terms: Net 30

Freight Terms:

Special Comments:

Items

Line Item	Job	Part	Description	Status	Due Date	Order Quantity	Received Quantity	Balance	Unit Price (CAD)	Extended Price
1	169661	RBW6405G08832-3G-01	Install Rod -Issue P/O to Groupe Altech: P/O _____ -Zinc plate, ASTM B633 TYPE 1 SC2 - Certificate of Conformity is required	Firmed	1/26/18	4 pcs	0 pcs	4 pcs	\$22.50/pcs	\$90.00
2	169786	SK145-0115-20	Clamp Bar ISSUE P/O: _____ PASSIVATE AS PER DWG ACCORDANCE WITH ASTM A967 C OF C IS REQUIRED	Firmed	1/26/18	5 pcs	0 pcs	5 pcs	\$20.00/pcs	\$100.00
3	170020	RB877528-4-17	R & I Adapter -Issue P/O to Groupe Altech; PO _____-Black oxide finish, MIL-C-13924C Class 1 -Certificate of Conformity is required	Firmed	1/26/18	5 pcs	0 pcs	5 pcs	\$10.91/pcs	\$54.55
4	170017	RB877528-4-1	Shaft -Issue P/O to Groupe Altech; PO _____-Black oxide finish, MIL-C-13924C Class 1 -Certificate of Conformity is required	Firmed	1/26/18	5 pcs	0 pcs	5 pcs	\$10.91/pcs	\$54.55
5	169098	RB6795635-2	Socket Assembly -Issue P/O to Groupe Altech; PO _____ -Black oxide finish, MIL-C- 13924C Class 1 -Certificate of Conformity is required	Firmed	1/26/18	1 pcs	0 pcs	1 pcs	\$10.91/pcs	\$10.91

Plex 1/26/18 7:56 AM dart.lavoie.chanta

Items										
Line Item	Job	Part	Description	Status	Due Date	Order Quantity	Received Quantity	Balance	Unit Price (CAD)	Extended Price
6	169840	646.3912	Shim Issue P/O: _____ Cat Plating CAD PLATE PER QQ-P-416, TYPE II, CLASS 2, CL2	Firmed	1/26/18	30 pcs	0 pcs	30 pcs	\$4.16/pcs	\$124.80
						✓ 30x			At 18/01/31	
7	168258	646.3913	Shim Issue P/O: _____ Cad Plating, CAD PLATE PER QQ-P-416, TYPE II, CLASS 2, CL2	Firmed	1/26/18	5 pcs	0 pcs	5 pcs	\$4.16/pcs	\$20.80
						✓ 5x			At 18/01/31	
8	168256	646.3911	Shim Issue P/O: _____ Cad Plating, CAD PLATE PER QQ-P-416, TYPE II, CLASS 2, CL2	Firmed	1/26/18	9 pcs	0 pcs	9 pcs	\$4.16/pcs	\$37.44
						✓ 9x			At 18/01/31	
9	169839	646.3910	Shim Issue P/O: _____ Cad Plating, CAD PLATE PER QQ-P-416, TYPE II, CLASS 2, CL2	Firmed	1/26/18	27 pcs	0 pcs	27 pcs	\$4.16/pcs	\$112.32
						✓ 27x			At 18/01/31	
Grand Total:										\$605.37

Order Notes

Procurement Quality Clauses

A005 right of entry
A012 chemical and physical test report
A016 personnel qualification
A017 raw material identification (as applicable)

A022 Apical Processing
A024 process certifications
A026 certification of material conformance

A041 quality management system
A042 dart notification by supplier
A043 retention of quality documents

A048 counterfeit parts avoidance, detection, mitigation and disposition program

A049 supplier awareness

Terms & Condition of Purchasing(Suppliers) and Procurement Quality Clauses are an integral part of our AS9100 requirements. To learn in detail, please visit www.dartaerospace.com for further explanation.

Plex 1/26/18 7:56 AM dart.lavoie.chantal



Certificat de Conformité / Certificate of Compliance

(005929-1)

2455, Rue Halpern | Saint-Laurent | Québec | H4S 1N9
 Tel: 514-335-3666 Fax: 514-335-3868
 www.groupaltech.com

Bon de Livraison / Packing Slip

005929 - 1

Livré à / Ship to

DART AEROSPACE LTD
 1270 ABERDEEN STREET
 HAWKESBURY, ON, K6A1K7
 CANADA
 Tel.: 613-632-5200 Fax.:

Client / Customer:

DART AEROSPACE LTD
 1270 ABERDEEN STREET
 HAWKESBURY, ON, K6A1K7
 CANADA
 BUYER:

Date expédition Ship date		Créé Par Generated By	Transport / No de Compte Courier / Acc. No.	Bon de commande Client Customer Purchase Order No.				
25-Jan-2018		Curtis Anderson		038806				
#Ligne Line#	No. de Série / # Pièce Part Number / Line Item Details Job # / Ref #	Description pièce(s)	CATG U/M	Comm. /Ordered	Exp/ Shipped	Qté NC/ NC Qty	Qté Scrap/	A venir/ Back Order
1	RBW6405G08832-3G-01 Rev.	INSTALL ROD 01 -ZINC-CLEAR TRI [ZINC CLEAR TRIVALENT] SPÉC: ASTM B633 TYPE 1 SC2 ***	ZINC CH	4	4	0	0	0
2	SK145-0115-20 Rev.	SK145-0115-20 01 -PASSIVATION- #3 [PASSIVATION #3] SPÉC: ASTM A967 C OF C *** SPÉC: AS PER DRAWING ***	PASSIVATION CH	5	5	0	0	0
3	RB877528-4-17 Rev.	R & I ADAPTER 01 -OXIDE BLACK [OXIDE BLACK] SPÉC: MIL-C-13924C CLASS 1 ***	OXIDE-BLACK CH	5	5	0	0	0
4	RB877528-4-1 Rev.	SHAFT 01 -OXIDE BLACK [OXIDE BLACK] SPÉC: MIL-C-13924C CLASS 1 ***	OXIDE-BLACK CH	5	5	0	0	0
5	RB6795635-1 Rev.	RB6795635-1 01 -OXIDE BLACK [OXIDE BLACK] MIL-C-13924C: CLASS 1 ***	BLACK-OXIDE CH	1	1	0	0	0
6	646.3912 Rev.	646.3912 CAD PLATE PER QQ-P-416 TYPE 2 CLASS 2 ,CL2	CADMIUM CH	30	30	0	0	0
7	646.3913 Rev.	646.3913 CAD PLATE PER QQ-P-416 TYPE 2 CLASS 2 ,CL2	CADMIUM CH	5	5	0	0	0
8	646.3911 Rev.	646.3911 CAD PLATE PER QQ-P-416 TYPE 2 CLASS 2 ,CL2	CADMIUM CH	9	9	0	0	0
9	646.3910 SHIM Rev.	646.3910 SHIM CAD PLATE PER QQ-P-416 TYPE 2 CLASS 2 ,CL2	CADMIUM CH	27	27	0	0	0



Certificat de Conformité / Certificate of Compliance

(005929-1)

2455, Rue Halpern | Saint-Laurent | Québec | H4S 1N9
 Tel: 514-335-3666 Fax: 514-335-3868
 www.groupaltech.com

Bon de Livraison / Packing Slip

005929 - 1

Livré à / Ship to

DART AEROSPACE LTD
 1270 ABERDEEN STREET
 HAWKESBURY, ON, K6A1K7
 CANADA
 Tel.: 613-632-5200 Fax.:

Client / Customer:

DART AEROSPACE LTD
 1270 ABERDEEN STREET
 HAWKESBURY, ON, K6A1K7
 CANADA
 BUYER:

Date expédition Ship date		Créé Par Generated By	Transport / No de Compte Courier / Acc. No.	Bon de commande Client Customer Purchase Order No.	
25-Jan-2018		Curtis Anderson		038806	
#Ligne Line#	No. de Série / # Pièce Part Number / Line Item Details	Description pièce(s)	CATG. U/M	Quantités / Quantities	
Job # / Ref #				Comm. /Ordered	Exp/ Shipped
				Qté NC/ NC Qty	Qté Scrap/
					À venir/ Back Order

Notes Additionnelles / Additional Notes

Epaisseur réelle
Actual Thickness

Inspecteur Qualité
Quality Inspector

Réçu par
Received By

Nous certifions que les pièces énumérées ci-dessus ont été traitées en conformité avec votre commande et vos spécifications et rencontrent les exigences.
 Notre responsabilité financière et légale ne sera pas supérieure au montant de la facture issue.

We hereby certify that the parts listed above have been process in accordance with your purchase order and specifications and are in conformance with your requirements.
 Our financial and legal responsibility will not be higher than the amount of invoice.